

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-5. (Canceled)

6. (Previously presented) A method of importing a peptide, polypeptide, or protein into a cell in a subject comprising administering to the subject a complex comprising the peptide, polypeptide, or protein linked to a mammalian hydrophobic importation competent signal peptide, thereby importing the peptide, polypeptide, or protein into the cell of the subject.

Claims 7 and 8. (Canceled)

9. (Previously presented) The method of Claim 6, wherein the signal peptide comprises the amino acid sequence set forth in SEQ ID NO:5.

10. (Previously presented) The method of Claim 6, wherein the molecule is an antigenic peptide.

11. (Previously presented) A method of importing a peptide, polypeptide, or protein into the nucleus of a cell in a subject comprising administering to the subject a complex comprising the peptide, polypeptide, or protein linked to an importation competent signal peptide and a nuclear localization peptide, thereby importing the peptide, polypeptide, or protein into the nucleus of the cell of the subject.

12. (Previously presented) The method of Claim 11, wherein the signal peptide comprises the amino acid sequence set forth in SEQ ID NO:5.

13. (Previously presented) The method of Claim 11, wherein the nuclear localization peptide comprises the amino acid sequence set forth in SEQ ID NO:2.

14. (Previously presented) The method of Claim 11, wherein the nuclear localization peptide comprises the amino acid sequence set forth in SEQ ID NO:10.

15. (Previously presented) The method of Claim 11, wherein the nuclear localization peptide comprises the amino acid sequence set forth in SEQ ID NO:11.

16. (Withdrawn) A method of regulating the growth of a cell in a subject comprising administering to the subject the complex of claim 1 comprising a growth regulatory peptide linked to the importation competent signal peptide.

17. (Withdrawn) The method of Claim 16, wherein the cell is a tumor cell.

18. (Withdrawn) The method of Claim 16, wherein the growth regulatory peptide stimulates the cell growth and comprises the nuclear localization sequence of acidic fibroblast growth factor.

19. (Withdrawn) The method of Claim 18, wherein the growth regulatory peptide comprises the amino acid sequence set forth in SEQ ID NO:3.

20. (Withdrawn) The method of Claim 18, wherein the growth regulatory peptide comprises the amino acid sequence set forth in SEQ ID NO:4.

21. (Withdrawn) The method of Claim 16, wherein the growth regulatory peptide inhibits the cell growth.

22. (Withdrawn) The method of Claim 21, wherein the growth regulatory peptide comprises the amino acid sequence set forth in SEQ ID NO:9.

23. (Withdrawn) A method of inhibiting expression in a cell in a subject of a gene controlled by transcription factor NF-κB comprising administering to the subject the complex of claim 1 comprising an importation competent signal peptide linked to a nuclear localization peptide of an active subunit of NF-κB complex.

24. (Withdrawn) The method of Claim 23, wherein the subunit of NF-κB is subunit p50.

25. (Withdrawn) The method of Claim 24, wherein the complex comprises the amino acid sequence set forth in SEQ ID NO:9.

26. (Withdrawn) A method of stimulating the immune system of a subject comprising administering to the subject the complex of claim 1 further comprising an importation competent signal peptide linked to an antigenic peptide.

Claims 27-32. (Canceled)

33. (Withdrawn) A method of screening signal peptides for the ability to effect the importation of a biologically active molecule into a cell comprising administering to the cell a complex comprising the molecule linked to the signal peptide and determining whether the molecule is imported into the cell, the presence of importation of the molecule indicating a signal peptide which can effect importation.

Claims 34-38. (Canceled)

39. (Not Entered)

40. (New) The method of claim 6, wherein the signal peptide is selected from the SigPep database.